

below, comprises the steps of spraying multiple coats in rapid succession onto the driving surface **120**. However any number of methods of deposition, such as hand application, film deposition, and so forth, can be used for any one or all of the constituent components of the solar energy harvesting composition.

[0054] The above solar energy harvesting strip **110**, according to exemplary embodiments of the present invention, merges solar harvesting and linear magnetic generation technologies. In exemplary embodiments of the present invention, photonic harvesting materials could be used for the conversion of photonic energy into electrical energy. However, in other embodiments of the present invention, thermal harvesting materials could be used to convert thermal energy into electrical energy. The solar energy harvesting composition may comprise only one or both of the photonic and thermal harvesting materials. When using both photonic and thermal energy to generate electricity, embodiments of the present invention are up to 50% more efficient than conventional solar cells. Conventional solar cells become less efficient as they heat up, whereas embodiments of the present invention using both photonic and thermal energy become more efficient.

[0055] In exemplary embodiments of the present invention, a solar energy harvesting strip **110** comprises a linear magnetic field generator for generating electrical flow. A linear magnetic field generator requires great distances in order to create a magnetic field capable of generating any appreciable current. Such distances could be achieved by the placement of the solar energy harvesting strip **110** on a length of driving surface **120** so as to produce a linear magnetic field generator. In this case, since the magnetic fields could be created over long distances, very little current would be needed from the solar harvesting materials. Even weak current flow creates magnetic fields of sufficient strength. Further, since magnetic fields are unaffected by ice, snow, dirt and so forth, keeping the surface clean and well maintained is of less importance. According to an exemplary embodiment of the present invention a vehicle passes over the solar energy harvesting strip **110** to power the vehicle. The vehicle receives power by having an inductive coupling device affixed thereto that passes through the magnetic field thereby producing electrical flow.

First Exemplary Embodiment of the Solar Energy Harvesting Strip:

[0056] A first exemplary embodiment of the solar energy harvesting strip **110** in elemental form is illustrated in detail in FIG. 2. The solar energy harvesting strip **110** comprises a multiple layer solar energy harvesting composition comprised of a bonding layer **210**, magnetic layer **220**, a thermal harvesting layer **230**, a conductive layer **240**, a photonic harvesting layer **250**, and a sealing layer **260**. These components are shown and arranged as one example, and in other embodiments of the present invention, components can be combined, added, removed and/or rearranged as required by the application or location. Further, all of the layers may be formed having the same width or the layers may be formed such that each layer positioned on top of another layer is narrower than the layer beneath it. Still further, the edged of any of the layers may be squared, rounded, or tapered. In FIG. 2, the energy harvesting composition is embodied as a strip, but may be formed in any configuration as required by the application or location.

[0057] In operation, the thermal harvesting layer **230** and/or photonic harvesting layer **250** convert thermal and/or photonic energy into electrical energy. The electrical energy migrates across and/or between the layers of the energy harvesting composition. In one embodiment, the electrical energy migrates along conductive traces on any of the layers and/or conductive ladders between any of the layers. In another embodiment, electrical energy flows through and between the layers of the energy harvesting composition without any conductive traces or ladders.

[0058] When a conductive layer **240** is included, the electrical energy migrates to the conductive layer **240** under the influence of a magnetic field generated by the magnetic layer **220** and/or bonding layer **210**. Conductive layer **240** stores the electrical energy and generates an electric field which augments the magnetic field. Further, conductive layer **240** may be attached to an electrical energy consumption, transmission and/or storage device. When the energy harvesting composition is embodied as a strip and conductive layer **240** is attached to an electrical energy consumption, transmission and/or storage device, one or more attachments may occur along the strip.

[0059] When a conductive layer **240** is not included, electrical flow occurs within and/or between the layers and generates an electric field which augments the magnetic field. With or without conductive layer **240**, the augmented magnetic field couples the energy harvested by the thermal harvesting layer **230** and/or photonic harvesting layer **250** to an electric vehicle and/or other remote devices. In another embodiment, the electrical energy is used to energize inductive coils that are used to couple the energy harvested by the thermal harvesting layer **230** and/or photonic harvesting layer **250** to an electric vehicle and/or other remote devices. A better understanding of the first exemplary embodiment of the solar energy harvesting strip **110** will be achieved through the following detailed discussion.

[0060] Bonding layer **210** is preferably comprised of a rubber or asphalt type adhesive and functions as a bonding agent between a surface on which the solar energy harvesting strip is applied and a subsequent layer. Further, the bonding layer **210** may additionally function to fill any cracks and/or fissures in the surface it is applied to, such as driving surface **120**. In an exemplary embodiment of the present invention, bonding layer **210** comprises a soft ferromagnetic material suspended in a rubberized material. When bonding layer **210** comprises the soft ferromagnetic material, the bonding layer **210** additionally functions to generate a magnetic field that becomes magnetized by magnetic layer **220**. Further, bonding layer **210** may function to electrically insulate the other layers from the surface it is applied to. Exemplary soft ferromagnetic materials include iron, soft iron, steel and magnetite. However, any magnetic material may be used.

[0061] Magnetic layer **220** is comprised of a permanent magnetic material. The magnetic layer **220** has a magnetic field that is perpendicular to the field in place, such as the field generated by the bonding layer **210** when the bonding layer **210** includes a soft ferromagnetic material. Magnetic layer **220** functions to generate a magnetic field, which will be described in greater detail below. The permanent magnetic material of magnetic layer **220** may be a permanent hard ferromagnetic material. Exemplary hard ferromagnetic